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ABSTRACT

The relationship between teachers' expectations of students' communicative competence in the classroom and certain aspects of teachers' language during interaction with students was investigated in a study involving 55 nursery school and primary school children and their seven female teachers. The teacher expectation model used in the study proposed that teachers form expectations of students' abilities, that they interact differentially with students depending upon those expectations, and that the expectations are directly related to students' achievement. Results of a sociolinguistic analysis of samples of teacher/student interaction during classroom lessons suggested that the original version of the teacher expectation model was neither powerful nor consistent in its predictions. The relationship between teachers' expectations of students' communicative ability and interaction during lessons was perceived to be a complex interaction involving teachers' expectations, the individual teacher, and the measure of behavior. (FL)

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Technical Report No. 473

TEACHER-STUDENT INTERACTION AND TEACHERS' PERCEPTIONS
OF STUDENTS' COMMUNICATIVE COMPETENCE:
A CROSS-SECTIONAL STUDY

by

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Abstract

The present study investigated the relationship between teachers' expectations of students' communicative competence in the classroom and teachers' language production. The study includes a sociolinguistic analysis of samples of teacher-student interaction during classroom lessons. The subjects were 55 students in nursery (11), first (20), second (7), and third (17) grades, in 7 classes and their 7 female teachers. All subjects were middle class, native English speakers, who attended or taught at a private school in an urban area. The data suggest that the original version of the teacher expectation model is neither powerful nor consistent in its predictions. The relationship between teachers' expectations of students' communicative ability and interaction during lessons is a complex interaction among: teachers' expectations, the individual teacher, and the measure of behavior.

Introduction

The purpose of this paper is to report the results of a pilot study which investigated the relationship between teachers' expectations of students' communicative competence in the classroom and certain aspects of teachers' language during interaction with students. The teacher expectation model, which was first introduced by Rosenthal and Jacobsen (1968), proposed that teachers form expectations of students' abilities; teachers interact differentially with students depending upon those expectations; and the expectations are directly related to students' achievement. This model stimulated a great deal of research for a decade; overall, the data lent some support to the model (see Brophy & Good, 1974). However, the consistency of treatment as predicted by the model--across different abilities, across different grades--has not been investigated in previous research. The pilot study reported here consists of a sociolinguistic analysis of samples of teacher-student interaction during classroom lessons taken from four elementary school grades. The pilot study was conducted to determine:

1. the extent of the language production of teachers which is available for analysis;
2. whether the teacher expectation model adequately predicts the language production of these teachers and their expectations of the communicative competence of their students.

The hypothesis of the teacher expectation model is that:

Teachers perceive differential competencies among students in their classes, and these perceptions result in differential expectations for achievement among the students. These expectations, in turn, influence teachers' interactions with those students to produce differential performance among them, thus fulfilling the prophecy.

(Brophy & Good, 1970; Rosenthal & Jacobsen, 1968) (Cherry, in press, p. 3)

Brophy and Good (1974) characterize the pattern of the self-fulfilling prophecy as the following:

Teachers took more appropriate action to elicit a good performance from the highs [that is, high expectancy students], and that they tended to reinforce it appropriately when it was elicited. In contrast, they tended to accept poor performance from the lows [that is, low expectancy students], and they failed to reinforce good performance properly even when it did occur. (Brophy & Good, 1974, p. 99)

Previous research by Cherry examined how two kindergarten teachers differentiated the quantity and quality of certain aspects of the language they directed to students for whom the teachers had differential expectations of communicative competence in the classroom (Cherry, in press). Communicative competence in the classroom refers to appropriate language use in the classroom. Competent students know when, where, and with whom they may speak and act and how to interpret implicit classroom rules. The results of Cherry's (in press) study provided partial support for the "self-fulfilling prophecy" hypothesis. On some measures of teachers' elicitation of information, either one or both of the teachers provided different

opportunities for the "above average" students in contrast with those for the "below average" students. The two teachers differed in the patterns of their attempts to elicit more appropriate responses from the "above average" students. The teachers also differed in their use of explicit positive feedback with the two groups of students, but these differences were not as strong as the differences in elicitations. The data also showed that occasionally the teachers interacted more frequently and in a more responsive manner with those students who were rated "below average" in communicative competence. One way to characterize this pattern of interaction is as a "remedial" role, in which the teacher attempts to assist the student who is perceived as less competent. The remedial role contrasts with the role of self-fulfilling prophecy. The data from previous research suggest that the individual teacher is an important variable in predicting differential language production as related to expectations.

Cherry has argued (in press) that these data support the view that there are at least two versions of the teacher expectation model. One version holds that teachers will consistently differentiate the behavior they direct towards students of different perceived competencies. Teachers' behavior during interaction is not seen to be highly affected by students' behavior during interaction. In addition, all teachers are expected to interact in a style which "fulfills their prophecy" about students' competencies. Another version of the teacher expectation model holds that teachers' behavior directed towards students of different perceived competencies is influenced by students' behavior during interaction. One implication of

this second "interactive" model is that teachers' behavior will not be consistent across situations, especially if a large quantity of data is gathered on the same group of teachers and students. Another implication of the model is that there may be differences among teachers in their pattern of differential interactive behavior with students of different perceived competencies. The "self-fulfilling" pattern may only describe one pattern of interaction; some teachers may interact in a "remedial" pattern.

The consistency across grade levels of differential patterns of teacher-student interaction has not been addressed in previous research on teacher expectations. Grade level may affect both the patterns of teacher-student interaction and the manner in which teachers communicate their expectations to students. Several studies investigated whether teachers' expectations affected teacher-student interaction at various grade levels (Brophy & Good, 1974; Conn, Edwards, & Rosenthal, 1968; Dusek & O'Connell, 1973; Entwisle, Cornell, & Epstein, 1972; Jose & Cody, 1971; Rist, 1970; Saunders & DiTullio, 1972; Lockheed, Note 1). The question of whether the phenomena of the "self-fulfilling prophecy" changes with grade level, however, has not been addressed by previous research, with the exception of a few preliminary studies (Baum, Note 2; Coulter, Note 3; Darnell & Goodwin, Note 4) and a recently published study by Crano and Mellon (1978).

Crano and Mellon (1978) examined the relationship between teachers' expectations and students' achievement across grade levels in a longitudinal design employing a cross-lag analysis. They studied 4,300 elementary school students to determine whether teachers' expectations affected

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students' academic achievement or vice versa. The results of their study showed that teachers' expectations of students' competence affected students' achievement; this finding corroborated the original teacher expectation model. Crano and Mellon's (1978) study did not directly address the central focus of the present pilot study, even though their study examined teacher expectation effects at several elementary grades. Crano and Mellon did not include a separate discussion of variation in students' achievement as a function of both teachers' expectations and grade level. Their study suffers from the same drawback characterizing most previous research on teachers' expectations: The process by which teachers communicate their expectations to students has not been examined. One result of studies designed in this way is that individual variation in teachers' interactive style cannot be observed, nor can the relationship between the variation of individual teachers and grade level be examined.

The present pilot study was conducted to assess the availability of language data in elementary school lessons and the adequacy of the teacher expectation model in predicting teachers' language behavior with students. Specifically, the following three questions were addressed in the study:

1. How much language data is available for analysis during classroom lessons in nursery, first, second, and third grades?
2. Do teachers differ in the amount of language data they produce while interacting with students during lessons?
3. Does the teacher expectation model adequately predict certain aspects of these teachers' language production with students for whom the teachers hold differential expectations of communicative competence?

Method

Subjects

The subjects for the study were 55 students: 11 in nursery, 20 in first grade, 7 in second grade, and 17 in third grade, in 7 classes and their 7 female teachers. All subjects were middle or upper middle-class and native English speakers. They all were present at the site school for the full academic year. In addition, all provided consent to participate in the study. Table 1 shows the distribution of subjects by classroom and teachers' ranking of the students as above average or below average in communicative competence in the classroom.

Procedures

Ranking. Teachers were asked to rank the students in their classes according to how well they used language to communicate effectively at the beginning of the school year. The teachers were then asked to divide their rank orders into the following groups: above average, average, and below average.

Data collection. The present study required a sampling unit that would be comparable for all classrooms across grade levels. The unit of sample that was chosen was the lesson, an instructional activity which focuses on a particular topic and consists of a sequence of exchanges between teacher and students (Cherry, in press). This definition allowed the sampling of units of teacher-student interaction from audio-video recordings made in the seven classrooms (see Cherry, in press). The present study found that teachers formulated lessons by stating requirements for students, as in the

Table 1
Distribution of Subjects by Classroom and
Teachers' Ranking of the Students

Class	Ranking	
	Above average	Below average
Nursery A	2	3
Nursery B	4	2
First A	5	5
First B	6	4
Second A	5	2
Third A	3	3
Third B	4	7
Total	29	26

following example: "I'm gonna write a word on the board, and if you know what the word says, put up your hand." During the lessons, both teachers and students remained in one area of the classroom and focused their attention on the teaching materials, such as the blackboard. Teachers expected students not to "call-out" simultaneously and responded with comments such as "I can only hear one of you at a time." Students were expected not to be disruptive during lessons, and teachers often responded to disruptions with replies such as "Excuse me, Sandy, may I have your attention?"

The data for this study consisted of seven lessons: two nursery, two first grade, one second grade, and two third grade. Each lesson was video and audiotaped. All lessons met the following criteria (after Cherry, in press): (a) high technical quality in both audio and video; (b) both "panning" and "stationary" cameras; (c) all subjects (both teachers and students) present; (d) recorded from the beginning to the end of the lesson. A description of each of the seven lessons is provided below.

Nursery (N-A; 22 minutes). The teacher and children were carving a Halloween pumpkin. The children took turns drawing features on the pumpkin; the teacher then cut these features out. The children tasted the pumpkin, talked about the smell and feel of the pulp, and discussed what could be done with the seeds. The lesson ended when the children left the room in order to prepare for snack time.

Nursery (N-B; 41 minutes). The teacher and students were seated in a circle discussing what should be done with the class pet, a bird which recently died and was decomposing. The class then discussed the funeral

arrangements for the bird. The lesson ended after the teacher and students decided which part of the funeral arrangement each student would participate in.

First Grade (1-A; 23 minutes). At the outset of the lesson, the teacher asked the students to write their names on a piece of paper. She then dictated eight words to the class. After each word was written down, one student was called upon to spell the word out loud. The teacher then told the class to write down the sentence that she was going to dictate to them. The class discussed the format of a sentence, and the lesson ended when the teacher told the class to turn their papers over, and to begin another lesson.

First Grade (1-B; 8 minutes). The teacher started the lesson by telling the students that they were going to have visitors for a "hot cross bun" party. Then the class discussed the origin of the custom of eating hot cross buns on Good Friday. Copies of the recipe for hot cross buns were distributed and the teacher chose students to read portions of the recipe. The lesson ended after the pupils wrote their names on their copy of the recipe and then put them away.

Second Grade (2-A; 16 minutes). The class was seated on the floor in a circle. The teacher passed out papers that asked questions about the Navaho Indians. These questions were read out loud by the teacher and then were discussed by the class. Afterwards, the teacher read the class a story about the Navaho's breakfast. The class talked about Navaho life and how it differs from their own. The lesson ended when the teacher told

the class to put their papers away.

Third Grade (3-A; 33 minutes). Various ways of forming plurals were discussed (adding s, es, or ies). The children gave examples of words that used different types of plural endings. The class then examined the rules required when forming plurals. The lesson ended when the teacher asked the class to stand up and stretch.

Third Grade (3-B; 35 minutes). The class and the teacher were seated in a circle on the floor. The teacher began the lesson by telling the students that she was going to turn on a light and leave it on forever. The class discussed how the teacher's behavior affected the environment--specifically its effect on energy conservation. The lesson ended when the teacher initiated a new topic of discussion.

Data analysis: Transcription. The lessons were transcribed from the audio and video recordings from beginning to end. Transcribers used the audio and video recordings during the transcription process as well as ethnographic reports which contained detailed information about the lesson recorded during the activity, and the tape indexes which contained specific information about the activities of the teachers and students derived from the recordings of the lessons. All transcriptions were checked at least once by another member of the research team before being typed. After the transcriptions were typed and rechecked, the transcriber added contextual information. These include gestures: for example, whether a child complied with a teacher's request for action, or whether a child provided a nonverbal response to a teacher's request for information.

Data analysis: Coding. The coding system used in the present study was developed by Cherry (in press). The lesson transcripts were coded by two researchers. After transcription, all the data in the lessons were coded. Data was only eliminated from analysis when a student's name was unknown, or some part of an interaction was inaudible, or the student or teacher was not "on-camera" or could not be identified. After the two researchers independently coded all the elicitation exchanges in all the lessons, the codings were compared. For analysis, discrepancies were resolved by discussion. The researchers independently coded all categories, and reliabilities were calculated by dividing the number of agreements by the number of agreements and disagreements. The average reliability for these categories exceeded 91%. After reliability was computed, disagreements were discussed, solved, and then included in the analysis. The coding system used in this study consists of three levels: exchanges (teacher-elicit, teacher-list, teacher-reinitiate); elicitations (explicit, overexplicit, implicit); and feedback (positive, negative, neutral, no feedback).

1. A teacher-elicitation exchange is a sequence of actions between the teacher and a student in which the teacher requests information from the student. It is assumed that the teacher expects a particular complete and correct response from the student. For example:

Teacher: Any more words that are real words that go with tree? (1)

Jane? (2)

Jane: Leaf. (3)

Teacher: Leaf (writes on board). (4)

2. A teacher-list exchange is a sequence of actions between the teacher and a student in which the teacher requests information. It is assumed that the teacher expects a particular complete and correct response from the student. The student involved in the previous teacher-elicited exchange has provided a response to that request, which may or may not have been followed by teacher feedback. Any student may be involved in a teacher-list exchange. For example, this segment of the lesson involved providing words that "go with tree"; (1), (2), and (3) comprise the teacher-elicited exchange while (4), (5), and (6) comprise the teacher-list exchange.

Teacher: Alright, Mary had her hand up. (1)

Mary: Tree. (2)

Teacher: Tree, we have. (3)

Arthur. (4)

Arthur: Cherry tree. (5)

Teacher: Cherry, alright. (6)

3. A teacher-reinitiate exchange is a sequence of actions between the teacher and a student in which the teacher requests information from a student, and it is assumed that the teacher expects a particular complete and correct response. The student involved in the earlier teacher-elicited exchange has not previously provided a response to that request. Any student may be involved in a teacher-reinitiate exchange. In the following example, (1) and (2) comprise the teacher-elicited exchange, and (3), (4), and (5) comprise the teacher-reinitiate exchange.

Teacher: OK, Ann, what is the second thing in the fourth row? (1)

Ann: (no reply) (2)

Teacher: John. (3)

John: The heart. (4)

Teacher: Good.

4. An explicit elicitation is a request for information which contains one of the following Wh- words when that word is not a conjunction: what, which, why, how, who, where. These utterances are explicit because they are interrogative forms which focus upon the kinds of information requested, as in: "What's the first thing in the second row?" In the following example, from a third grade lesson on ecology, the teacher provides an elicitation which contains a Wh- question and focuses upon the kinds of information requested.

Teacher: What does the ozone layer do for us, Andrew? (1)

Andrew: That's something that keeps all the air from rushing out, and going into space and dissolving into no . . . into nothing. (2)

Teacher: Not exactly.

5. An implicit elicitation is a request for information containing a vocative standing alone, the child's name. Implicit elicitation provides students with less information about the topic and does not help students to focus on the elicitation. An example of implicit elicitation is provided in the following excerpt, in which a class was discussing how the Navaho form their pottery.

Teacher: Mary. (1)

Mary: Um, it takes out the vapor and besides, the clay, um, gets you know, heated, and um, even so without some

moisture, it's it's . . . (2)

Teacher: Something else happens. (3)

6. An overexplicit elicitation is a declarative, imperative, or interrogative request for information which focuses upon the acts involved in responding, and is therefore very explicit. These utterances include declaratives such as "Bonnie hasn't had a turn yet," imperatives such as "Give me one word, one word that you think of when you think of 'tree,'" and interrogatives such as "Can you tell me another one?" The overexplicit elicitation focuses upon the acts involved in responding. The following example is taken from a third grade class discussing plural formation.

Teacher: Give me an example, Lori, of a plural. (1)

Lori: Mouse and mice. (2)

Teacher: All right. (3)

7. Positive feedback contains an explicit positive evaluation word or phrase such as "yes," "right," "gorgeous," or a comparative word or phrase such as "That's better." It may specify how the response will be used in the lesson, such as the teacher writing the response on the blackboard or commenting on it. An utterance may imply a positive evaluation such as "That's one way of saying it."

8. Negative feedback contains an explicit, negative evaluation word or phrase such as "no," "not an answer." It may be a function word which indicates a negative evaluation such as "but" or "though," as in "That's a pattern, but I was talking about sets." It may also be an utterance which provides the reason for the inappropriateness of the response in a

particular context, such as "We have 'dog'" in a lesson on words which begin with the letters "B" and "D".

Teacher: Ron. (1)

Ron: I got two. "Puff" and "bear." (2)

Teacher: Alright, "puff" begins the way "pig" begins. (3)

In this instance, the student's word "bear" receives an implied negative evaluation in the teacher's feedback.

9. Neutral feedback allows the student more time to respond, such as "I'll come back to you," "Well, you think about it a minute." Also included are conversational, not evaluative, utterances such as "May I interrupt you?"

10. No feedback is the absence of a positive, neutral, or negative form.

Data analysis: Measures. The following measures were calculated so that the research questions could be addressed.

1. How frequent are teachers' elicitations of information from students rated "above average" and "below average" during lessons? The combined number of teacher-elicitation, teacher-list, teacher-reinitiate exchanges divided by the number of minutes per lesson; and the total number of teacher-elicitation, teacher-list, teacher-reinitiate exchanges divided by the total number of students.

2. Do teachers differ in the frequency of their elicitations of information from students rated as "above average" and "below average" during lessons? The combined number of teacher-elicitation, teacher-list, teacher-reinitiate exchanges for each teacher divided by the number of minutes in the lesson for each teacher.

3. Do teachers of different grade levels differ in the frequency of their elicitations of information from students rated as "above average" and "below average" during lessons? The combined number of teacher-elicitation, teacher-list, teacher-reinitiate exchanges for each grade divided by the number of minutes in the lesson(s) for each grade.

4. Do teachers differentiate between students rated as "above average" and "below average" by providing one group with:

- (a) more opportunities to participate in elicitation exchanges, the total number of teacher-elicitation, teacher-list, teacher-reinitiate exchanges;
- (b) more explicit and overexplicit elicitations, the total number of explicit and overexplicit elicitations divided by the total number of elicitations;
- (c) more elicitations for which the same student or another student has been unable to provide a positively evaluated response, the number of teacher-list and the number of teacher-reinitiate exchanges;
- (d) more explicit positive evaluation of responses, the total number of positive feedbacks divided by the total number of feedbacks.

Results and Discussion

The data are presented in Tables 2 and 3; the results will be discussed according to each research question.

1. How frequent are teachers' elicitations of information from students during lessons? As can be seen in Table 2, there were 132 combined elicitation exchanges (teacher-elicite, teacher-list, teacher-reinitiate) overall. The total time for the lessons was 178 minutes and the total number of students was 55. The teachers showed an average of .74 elicitation exchanges per minute for these students, and an average of 2.40 elicitation exchanges per student. The data available for further analysis are very small, since the teachers' production of elicitation exchanges was infrequent.

2. Do teachers differ in the frequency of their elicitation of information from students rated "above average" and "below average" during lessons? A one-way analysis of variance was computed for the combined number of elicitation exchanges for each of the seven teachers, which adjusted for the duration in minutes of the lesson. The results of this analysis yielded a significant effect for teachers, $F(6,48) = 5.74$, $p < .01$. Teachers show considerable variation in their production of elicitation exchanges.

3. Do teachers of various grade levels differ in the frequency of their elicitation of information from students rated "above average" and "below average" during lessons? A correlation coefficient was calculated for the combined number of elicitation exchanges (adjusted for duration of

Table 2
 Raw Frequencies and Adjusted Scores for Combined Teacher-
 elicit, Teacher-list, and Teacher-reinitiate Exchanges

	Rank		Total	Total adjusted for N
	Above average	Below average		
Nursery A	2	0	2	.40
Nursery B	5	2	7	1.17
First A	16	5	21	1.91
First B	11	21	32	3.20
Second	0	3	3	.43
Third A	6	13	19	3.17
Third B	27	21	48	4.36

lesson) for each teacher in each grade; $r = .30$, which is not statistically significant with five degrees of freedom. There was a slight tendency for teachers of the upper grades to produce more elicitations in contrast to teachers in the lower grades.

4. Do teachers differentiate between students rated "above average" and "below average" by providing one group with more

- (a) opportunities to participate in elicitation exchanges;
- (b) explicit and overexplicit elicitations;
- (c) elicitations for which no student has previously been able to provide a positively evaluated response; and
- (d) explicit positive evaluation of responses?

Of the 42 possible comparisons for the 7 teachers across 6 measures, 4 did not show any difference; 19 showed a difference favoring the "above average" students ("self-fulfilling" pattern), while 19 showed a difference favoring the "below average" students ("remedial" pattern). Thirty-eight t -tests were calculated for the comparisons which showed a difference; three of the tests were significant at the $p \leq .05$ for the "self-fulfilling" pattern, and five of the tests were significant at the $p \leq .05$ for the "remedial" pattern (two-tail). These results do not provide strong overall support for the teacher-expectation model which predicts that teachers will interact with "above average" students in a "self-fulfilling" pattern. As can be seen in Tables 3 and 4, teachers are not consistent in their pattern of interaction (self-fulfilling versus remedial) across measures. The data indicate however, that some measures show greater consistency across teachers

Table 3
Measures of Teachers' Speech

		Measures											
Class	Rank:	Teacher elicit ^a		Teacher list ^a		Teacher reinitiate ^a		Combined TE, TL, TR ^a		Overexplicit and explicit elicitations ^b		Positive feedback ^b	
		Above	Below	Above	Below	Above	Below	Above	Below	Above	Below	Above	Below
Nursery A		.50	0	.50	0	0	0	1.00	0 ^c	1.00	0	0	0
Nursery B		.50	0	.25	1.00	.25	0	1.25	1.00	.50	.50	.75	1.00
First A		2.20	.80 ^c	.40	.20	.40	0	3.00	1.00 ^c	.88	.80	.25	.60
First B		.83	0	1.00	.50	.20	.75	2.00	.25	.36	.90 ^c	.33	.75 ^c
Second A		0	1.00	0	.50	0	0	0	1.50 ^d	0	.50	0	.25
Third A		1.33	1.67	.67	2.67 ^c	0	0	2.00	4.33	.50	0	.67	.77
Third B		3.00	.85	1.25	1.86	0	.29	4.25	2.71	.85	.49	.26	.67

^a These categories are means.

^b These categories are proportions.

^c $p \leq .05$.

^d $p \leq .01$.

Table 4
Summary of Data^a

Measure	Class						
	Nursery A	Nursery B	First A	First B	Second	Third A	Third B
Teacher elicit exchanges	X	X	X				X
Teacher list exchanges	X		X	X			
Teacher reinitiate exchanges		X	X				
Combined teacher elicit, list, reinitiate exchanges	X	X	X				X
Proportion of explicit and overexplicit elicitations	X	X	X			X	X
Proportion of positive feedbacks						X	

^a An "X" designates when the prediction from the teacher expectation model was confirmed; that is, the difference between the score for the "above average" students and the "below average" students is positive.

than other measures. It appears that explicit and overexplicit elicitions consistently show a self-fulfilling pattern (five out of seven teachers), while positive feedback tends consistently to show a remedial pattern (five out of six teachers).

Overall, the data from the present study suggest that the original version of the teacher expectation model is neither powerful nor consistent in its predictions. Any interpretation of the results of the present study must be qualified, since the data available for analysis was so limited. These data suggest, however, that the relationship between teachers' expectations of students' abilities and communication during lessons is a complex interaction among teachers' expectations, the individual teacher, and the particular measure of behavior.

In conclusion, the results of the present pilot study suggest that further research on the relationship between teachers' expectations of students' abilities and communicative behavior is needed. The original version of the teacher expectation model, the "self-fulfilling prophecy," may not predict teacher behavior when specific abilities are involved (such as communicative competence) or when the process of interaction between teachers and students is examined in detail. In addition, the present study suggests that individual differences among teachers are an important variable in the way teachers communicate their expectations to their students. This finding corroborates previous research (Cherry, in press), and suggests that further research should focus upon teachers. A large enough sample of teachers is needed to enable researchers to estimate the variation among

them in their interactive behavior with students. The data also suggest that grade may affect the quantity of teacher-student interaction, so further research should also include a separate analysis for variation due to grade level. In sum, the results of the present pilot study provide support for the interactive version of the teacher expectation model. Teachers' behavior towards students is not necessarily consistent across situations and individual teachers may differ in the way they communicate their expectations of students' competence to them. Further research is needed to develop and test a complex model of the relationship between teachers' expectations and their interactions with students.

Reference Notes

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